

Transgenic Mice Over-expressing ABAD and Mutant APP in  
Brain as Model of Alzheimer's Disease and Uses Thereof

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Abstract of the Disclosure

The present invention provides for a transgenic non-human animal whose cells contain a DNA sequence comprising: (a) a  
10 nerve tissue specific promoter operatively linked to a DNA  
sequence which encodes amyloid-beta peptide alcohol  
dehydrogenase (ABAD), and (b) a nerve tissue specific  
promoter operatively linked to a DNA sequence encoding a  
mutant human amyloid precursor protein hAPP695, hAPP751 and  
15 hAPP770 bearing mutations linked to familial Alzheimer's  
disease in humans, wherein said non-human animal exhibits at  
least one phenotype from the group consisting of: reduced  
basal synaptic transmission; inhibited synaptic plasticity;  
increased neuronal stress; elevated 4-hydroxynonenal in  
20 cerebral cortex; increased heme oxygenase type I in cerebral  
cortex; decreased synaptophysin in cerebral cortex; decreased  
microtubule-associated protein 2 in cerebral cortex; and  
increased levels of activated caspase 3 antigen in cortical  
neurons.

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